ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT (In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	1st Qtr.	49.913	3.9	9.2	NA	NA
Arizona - 1982 Dollars	1st Qtr.	45.741	3.1	6.9	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	3rd Qtr.	193.7	0.6	1.2	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	August	109.7	0.4	3.2	NA	NA
BUILDING PERMITS (Total Dollar Value in Thousands)						
Maricopa County	July	362,773	23	-12	2,478,072	-2
Pima County	July	63,398	-28	-15	531,276	10
Balance of State	July	83,630	105	37	380,925	-4
Arizona	July	509,801	20	-7	3,390,273	0
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	July	3,339	0	-16	29,845	-9
Pima County	July	1,253	-22	63	7,586	-1
Balance of State	July	1,259	50	2	7,446	-27
Arizona	July	5,851	1	-2	44,877	-12
HOME SALES						
Maricopa County - Number	August	6,112	14	28	39,911	9
Maricopa County - Median Price	August	79,000	0.4	3.9	77,200	5.5
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	2nd Qtr.	92	3.4	13.6	NA	NA
Metropolitan Phoenix - Resale Homes	2nd Qtr.	105	1.0	16.7	NA	NA
MORTGAGE INTEREST RATES (Conventional, 30-year, Fixed-rate)						
Maricopa County	Sept.	9.9	-1.0	-18.2	NA	NA
POPULATION ESTIMATES (In Thousands)						
Maricopa County	2nd Qtr.	1,902	1.1	4.9	NA	NA
Arizona	2nd Qtr.	3,380	1.0	4.5	NA	NA
ELECTRICAL POWER SALES (In Millions of Kilowatt Hours)						
Arizona	August	4,153	9.8	6.3	24,948	1.0

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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CENTER FOR BUSINESS RESEARCH

Migration Patterns Stabilize During '80s

During 1983-84 (the latest year for which data are available), national migration flows generally continued to follow the pattern of the early 1980s, providing additional evidence that migration streams during the mid-to-late 1970s were aberrations in the long-term trend.

This article updates information presented in the February 1986 *Arizona Business* (page 3) and extends the analysis into other migration topics. The data, primarily from the Internal Revenue Service (IRS), do not represent complete counts of all migrants but are useful in making geographical and temporal comparisons.

Migration can be measured in a variety of ways; each is examined in this article. "Net migration," the most frequently used, is the difference between in-migration and out-migration. "Migration efficiency" is the ratio of in-migration to out-migration. An efficiency of 100 indicates an equal number of in- and out-migrants; the higher the value, the more in-migration exceeds out-migration. The only figures presented in this article are migration efficiencies because the incompleteness of the IRS data results in underestimates in each of the other migration measures.

Sometimes, in-migration and out-migration are added together – "gross migration" refers to the total flow of people in both directions. Finally, migration rates can be deter-

See "Migration," page 2

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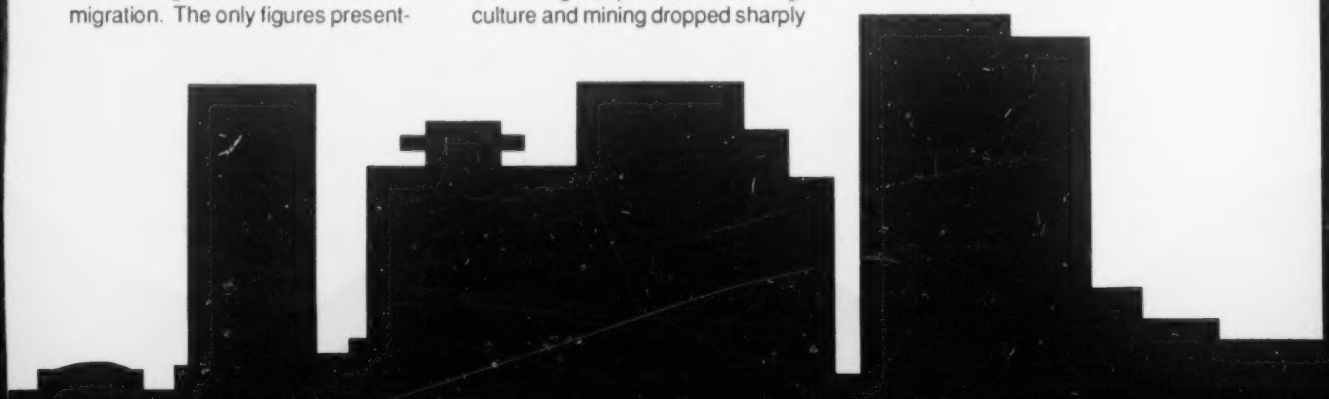
GSP Growth Remains Vigorous in 2nd Quarter

The Arizona Gross State Product (GSP) expanded a moderately strong 7.0 percent (inflation-adjusted and annualized) during second quarter 1986, slower than the first quarter growth rate. However, adjusted GSP, which excludes the volatile agriculture and mining industries, rose at a much faster 11.4 percent, comparable to the rates of the two prior quarters (see Table 1).

As indicated by the unusually large difference between the growth of real GSP and its adjusted measure, the gross products of both agriculture and mining dropped sharply during the second quarter. These valuations are subject to considerable revision, however, primarily from changes in personal income estimates. All other sectors except transportation, communication and public utilities (TCPU) experienced growth in their gross products. Once again, the finance, insurance and real estate (FIRE) sector expanded most rapidly.

The expansion of Arizona's economy continued to outdistance

See "GSP," page 6



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"Migration," from page 1

mined by dividing flows by population to adjust for the effect of a heavily populated state; for example, New York provides a large number of migrants to all states simply because of its size. To determine the rate of in-migration to Arizona from New York, that flow is divided by New York's population.

DEMOGRAPHICS AND DYNAMICS

Research on national and international migration has yielded several relationships that are obvious in Arizona's migration flows. A disproportionate number of migrants are young, well-educated professionals (see page one, July 1985 *Arizona Business* and page one, February 1986 *Arizona Business*). These people change residence primarily for work-related and economic reasons, though quality-of-life factors, such as climate, also play a role.

Migrants generally are "pulled" to an area by factors such as availability of jobs, rather than "pushed" from their old residence by poor economic conditions. Since many migrants move more than once, an area with high in-migration usually also experiences relatively heavy out-migration; this is true of Arizona. Further, a relatively large counterstream usually develops, even with areas that provide considerable in-migration, as in the case of Arizona and Illinois.

Once established, a migration flow frequently will last for decades unless broken by a sharp change in economic conditions. One reason for the continuity is the information that travels between friends and relatives who have moved and those who have not. Further, in-migration and employment growth perpetuate each other.

In choosing a new residence, people are likely to move to the nearest location that satisfies their needs. Thus, Arizona's in-migrants disproportionately come from the West and Midwest; people in the Mideast and Northeast more frequently move to the Southeast.

This concept of "intervening opportunities" may explain Arizona's record net in-migration between 1984 and 1986. With booming economies, Texas and Oklahoma, both closer to the Midwest and East, attracted huge numbers of migrants between the early 1970s and early 1980s. However, economic problems in the oil-producing states since 1983 may have forced some people to travel further, to Arizona, to meet their needs.

Not all migrants fall into the category of young people moving for economic reasons. While the middle-aged population moves relatively infrequently, the incidence of migration rises somewhat at retirement. Unlike the repeatedly moving young, for whom Arizona frequently is a temporary stop, retirees generally move just once, and a counterstream does not develop.

NATIONAL MIGRATION PATTERNS

Ever since European settlement, North America has experienced east-to-west migration. North-to-south movement has become more common in recent decades. Within these consistent long-term patterns, migration involving smaller regions has varied with changing economic conditions.

The Northwest, for example, attracted many migrants during the mid-to-late 1970s. This region has suffered net out-migration during the 1980s. In contrast, while still experiencing net out-migration, the Northeast has not lost nearly as many people during the 1980s as in the mid-to-late 1970s. While exaggerated by the Eastern press, an economic rebound has occurred in the Northeast.

Between the early 1970s and early 1980s, the oil-producing states in the West South Central region grew rapidly. In 1983-84, however, Louisiana and Oklahoma experienced net out-migration. The situation in that region is far worse in 1986.

Net out-migration has characterized the Midwest for years. The flows have hardly changed during the 1980s, except that some of the farm-dependent states have more outflow than ever. The migration experiences of various regions are illustrated in Figure 1.

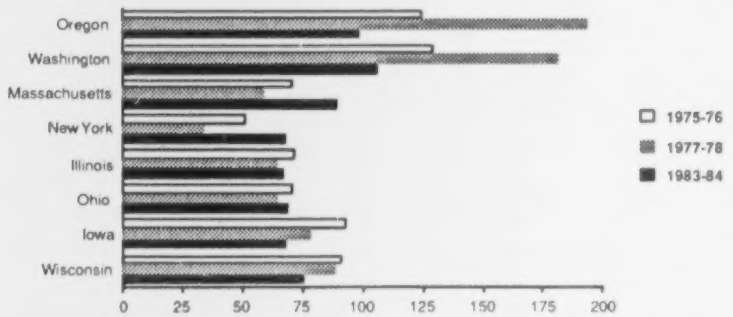
ARIZONA MIGRATION

This section utilizes 1970-84 IRS data to analyze Arizona's migration flows derived from each of the measures defined in the introduction.

In-Migration

More people moved to Arizona in 1983-84 than to all but eight other states. Since the late 1970s, Arizona consistently has ranked between eighth and tenth in the number of in-migrants. Each state with greater in-migration has a larger resident population than Arizona: Florida, Texas, California, Virginia, Georgia, New York and Illinois.

FIGURE I
TOTAL MIGRATION EFFICIENCY
Selected States



Source: Center for Business Research, College of Business, Arizona State University; from Internal Revenue Service data.

The number of people moving to Arizona varies with the economic cycle, and the flow during the 1982 recession constituted 80 percent of the 1978-79 peak. (This peak was exceeded after 1983-84). While migration in general is cyclical, it is more apparent in states with rapidly growing populations such as Arizona and Florida.

States providing the greatest number of Arizona's in-migrants during 1983-84 were located either in the West or near the Great Lakes. Eighteen percent of in-migrants were from California, far more than from New Mexico or Illinois, the next largest contributors, each with 7 percent. The smallest number of in-migrants came from small Northeastern states and from Southern states such as Mississippi and Alabama.

Continuing the trend of the 1980s, the 1983-84 proportion of migrants from Michigan, Ohio and New Jersey declined, each reaching the lowest level since IRS data became available. In contrast, the proportions from three of Arizona's neighboring states, Colorado, Utah and New Mexico, reached their highest levels.

Expressed as a rate, migration to Arizona usually is dominated by small states in the West, led by New Mexico. States in the East and South have the lowest rates (Alabama, Delaware, South Carolina and West Virginia).

Out-Migration

Since the early 1970s, Arizona consistently has ranked 19th or 20th in the nation for number of people leaving the state. Arizona's resident population ranking is 27th, meaning that a relatively large number of people leave the state each year.

Out-migration has varied less than 10 percent between peak and trough years. In 1983-84, California was the destination of 22 percent of those who left Arizona. Twelve percent moved to New Mexico and 9 percent to Texas; other common destination states included Florida, Illinois and Michigan. The smallest number of people went to small states in the Northeast.

Compared to 1982-83, the proportion of out-migrants to New Mexico, Georgia and Michigan increased, reaching peaks in each case. Out-migration to the oil-dependent states - Texas, Oklahoma and Colorado - declined.

As a rate, the greatest out-migration was to other Western states, led by New Mexico and Nevada. The lowest rates again were with Eastern and Southern states.

Gross Migration

Arizona has ranked 14th in total migration in both directions throughout the 1980s. Except for a dip during the 1982 recession, the number has been relatively stable since the late 1970s.

The greatest migration occurs with Western and large Midwestern states. Flows have declined with certain Midwestern states but have increased with several Western states, particularly Utah and New Mexico.

Migration to and from New York accounted for 3 percent of Arizona's gross migration in 1983-84, ranking New York's rate ninth highest. After adjusting for population, however, their rate dropped to 10th lowest.

Net Migration

When the net number of in-migrants is measured, Arizona ranks between second and ninth highest, the peak rank having occurred in the early 1970s and the low during the 1975 recession. Arizona placed fifth in 1983-84, behind Florida, Texas, California and Georgia. Except for Florida and Texas, which have experienced greater net in-migration every year since the early 1970s, the states ranking higher than Arizona have alternated.

Mostly because of fluctuations in in-migration, Arizona's net migration has varied widely with the economic cycle. According to the incomplete IRS data, net migration during 1975-76 was only 25 percent that of 1978-79, though the Center's population estimates do not assume a range quite that large.

Net in-migration to Arizona generally is greatest from northern states in the West and Midwest. In 1983-84, net in-migration from Illinois was nearly twice as great as that from the next-highest-ranked states (Michigan, Ohio and California). Several other states reached highs: Colorado, Idaho, Utah, Wyoming, Iowa and Illinois.

Arizona usually experiences net out-migration to only a handful of states in any year; the numbers generally are small and persist for only one or two years. However, Arizona normally suffers net out-migration to New Mexico, Nevada and Alaska; between the early 1970s and early 1980s, the oil-producing states commonly were included on this list. During 1983-84, Georgia, South Carolina and Virginia also received more Arizonans than vice-versa.

When migration is expressed as a rate, states in the Northwest and Midwest, including Wyoming, Utah, Colorado, South Dakota and Nebraska, contributed the greatest net migration to Arizona in 1983-84. The lowest rates, some negative, were with Southern and neighboring states, led by New Mexico.

Efficiency

The total effectiveness of Arizona's migration has ranged between 130 and 157 since the mid-1970s, usually placing it between the second and fourth highest in the nation. The efficiencies are cyclical, with the peak reached in 1978-79 and the low point in 1982-83.

Florida's total efficiency consistently has been higher than Arizona's, while those for Texas, Alaska and Nevada sometimes have been higher. In 1983-84, Arizona's maximum efficiencies with individual states were with those in the Midwest (see Figure II). The ranking of the lowest individual efficiency is nearly identical to the ranking of the lowest net migration.

Many state efficiencies rose during 1983-84, particularly in the West and West South Central regions. In contrast, efficiencies declined with other states, particularly those in New England.

COMPARISON TO COMPETITORS

With the nation's dominant migration flows away from the Northeast and Midwest and toward the Southeast, Southwest and West, Arizona

"competes" with several states for migrants. Since the mid-1970s, the primary rivals have been Florida, Texas and California. Other states that have done well for briefer periods include Georgia, Oklahoma, Colorado and Nevada.

This section reviews the basic migration patterns to and from each of Arizona's major competitors (see Figure III).

California

During the 1970s, California experienced little net in-migration. Although the state attracted huge numbers of in-migrants, more than any other state, large numbers of people left, particularly for other Western states. During the 1980s, the number of in-migrants to California fell slightly, but out-migration dropped more precipitously. Net in-migration since 1981 has exceeded Arizona's, though California has a lower total efficiency.

The regional pattern of migration to and from California is nearly identical to that of Arizona. Thus, the two states are direct competitors.

Colorado

Through the 1970s, Colorado's net migration and total efficiency each was similar to that of Arizona, though slightly lower. Migration surged during the 1981-82 energy boom but subsequently crashed; net in-migration was minimal in 1983-84 as in-migration declined.

Until the slump in the energy industry, the regional pattern of migration to and from Colorado was similar to that of Arizona, except that Colorado did better against its neighboring states, such as Nebraska.

Florida

Since the mid-1970s, Florida's total efficiency consistently has exceeded Arizona's by 20 to 30 points; it frequently has been the highest in the nation. Its attraction of retirees may be a factor in its effectiveness. Net in-migration has been approximately four times as great as to Arizona; Florida has ranked first nearly every year. In-migration increased during the late 1970s and since has held steady. Out-migration has remained constant.

While some overlap exists, the geographical sources of Florida's migrants are different from those of Arizona. Florida draws more heavily from the East Coast and Mideast, while Arizona attracts more Midwesterners. Indiana is the dividing line. Florida's four-times-as-many migrants can be explained partially by the twice-as-great population northeast of Indiana than in the northern tier of states west of Indiana.

Georgia

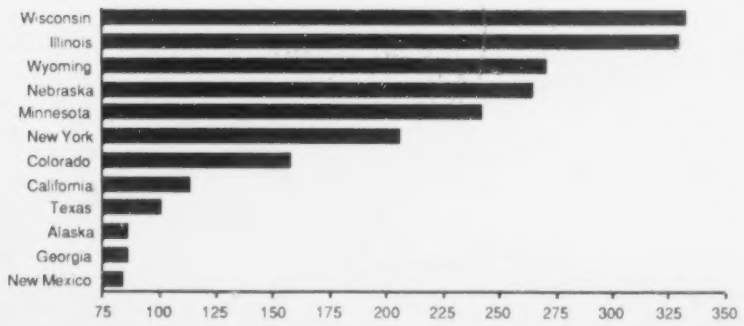
Georgia's total efficiency and net migration surged after 1981. While its efficiency remains 5 to 10 points below that of Arizona, its net in-migration between 1982 and 1984 was identical. Both an increase in in-migration and a decrease in out-migration contributed to the improvement.

The sources of migrants to Georgia are similar to those for Florida.

Nevada

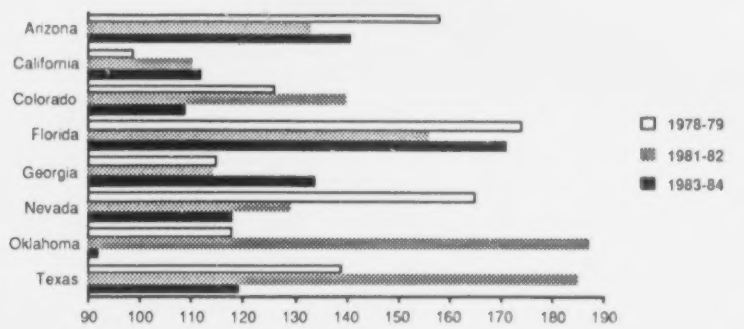
Through the middle and late 1970s, the total efficiency of migration to Nevada was higher than that to Arizona. However, Nevada's efficiency declined during the 1980s, dropping to 20 points less than Arizona's. Net migration always was less than that for Arizona, but it dropped to barely positive after

FIGURE II
EFFICIENCY OF ARIZONA MIGRATION
With Selected States, 1983-84



Source: Center for Business Research, College of Business, Arizona State University; from Internal Revenue Service data.

FIGURE III
TOTAL MIGRATION EFFICIENCY
States With Large Net In-Migration



Source: Center for Business Research, College of Business, Arizona State University; from Internal Revenue Service data.

1982. Changes in both in-migration and out-migration during the 1980s contributed to the deterioration, which can be traced to Nevada's dependence on the slumping gambling industry.

The geographical pattern of migration to and from Nevada and Arizona is similar, except that Nevada has attracted more people living in certain southern states, including Georgia, Louisiana and New Mexico.

Oklahoma

Until the oil boom in 1981-82, Oklahoma's total migration efficiency was similar to, or somewhat less than, Arizona's efficiency. After surging to 186 in 1981-82, the highest in the nation, Oklahoma's efficiency fell to less than 100 by 1983-84. Similarly, Oklahoma's net in-migration usually was less than Arizona's; the only exceptions were in 1981-82 and during the 1975 recession. Oklahoma's varying fortunes during the 1980s have resulted mostly from fluctuations in in-migration, though out-migration did increase after 1982.

The regional pattern of migration to and from Oklahoma is not too dissimilar from that to and from Arizona, except that Oklahoma's efficiencies with the Northwest are lower.

Texas

Between the early 1970s and 1983, the total effectiveness of Texas' migration exceeded that of Arizona's migration. But after jumping to 184 in 1981-82, Texas' efficiency fell to less than 120 in 1983-84, closer to the experience of the early 1970s (prior to the first oil shock).

Net in-migration to Texas has been greater than that to Arizona since the early 1970s. However, after generally exceeding Arizona's number by three or four times, the difference in 1983-84 was relatively slight.

In terms of regional migration patterns, Texas does much better against Southern states but worse against Northwestern states, in comparison to Arizona.

SUMMARY

The number of people who leave Arizona is relatively consistent from year to year, but the number who move to Arizona varies with the economic cycle. During recessions, which can be relatively severe in Arizona, the economic "pull" of the state is temporarily minimized. As a result, net in-migration and total migration efficiency each is lower during recessions. Other than this economic cyclicality, total migration to and from Arizona hardly varied during the 1970s and early 1980s.

Arizona's strongest migration flows occur to and from states in the West and Midwest. After adjusting for differences in population size among other states, migration rates are highest with states in the Northwest and Northern Plains.

Several states in the South, from Florida to California, are prime destination states for migrants. Since distance is a major factor in many migrants' determination of where to move, Arizona directly "competes" for migrants with other Southwestern states but not with Southeastern states.

Many population projections assume that the current record level of employment-related net in-migration to Arizona will continue indefinitely. Yet the supply of potential migrants will steadily decline as the baby-boom generation ages out of the prime migratory years. These optimistic population projections will not be attained unless some or all of the following changes occur:

- Arizona attracts a greater proportion of those people from the West and Midwest who will migrate to the Southwest.
- More residents of the Mideast and Northeast move to the Southwest instead of to the Southeast.
- The U.S. population becomes more mobile.
- Arizona's economy avoids downturns.

– Tom R. Rex
Research Manager

'86 Index Available

An index to the 1986 issues of *Arizona Business* is available on request from the Center for Business Research by calling (602) 965-3961.

"GSP," from page 1

national growth by a greater-than-normal margin, measured by either adjusted or unadjusted real GSP. Economic gains in Arizona remain well above the long-term average, largely due to rapid population increases, while growth nationally fails to reach its long-term norm.

REVISIONS

The GSP again was revised, back to 1980, primarily because the U.S. Bureau of Economic Analysis issued new, benchmarked personal income estimates. The revisions boosted growth during 1981, 1982 and 1985 but lowered it in 1983.

As predicted, 1985 personal income data were revised up. Consequently, real GSP growth during 1985 reached 8.5 percent, compared to the 7.6 percent previously reported. Adjusted GSP expanded even faster, at a 9.7 percent rate, up from 8.5 percent. Growth was significantly greater in the first and fourth quarters than previously reported.

OUTLOOK

Arizona's GSP continues to outperform not only GNP but also the Center's expectations. With the revisions incorporated in the second quarter, it now appears that annual average GSP growth during 1986 may match the rapid rate recorded in 1985. Second quarter 1986 GSP was 9.6 percent higher than second quarter 1985 GSP.

While some modest slowing is still foreseen for 1987, annual growth could substantially exceed the 6 percent rate predicted in the last economic forecast issued by the Center. If so, 1987 would be the fifth consecutive year of superlative economic expansion, the longest unbroken string of above-average growth since GSP measurement began in 1960.

– **Tom R. Rex**
Research Manager

TABLE 1
ECONOMIC GROWTH

	Arizona Gross State Product[r]				Gross National Product
Quarter	*Billions of Current Dollars, Annualized*	*Billions of 1982 Dollars, Annualized*	*Annualized Percent Change (1982 Dollars)*	*Annualized Percent Change (Adjusted GSP)**	*Annualized Percent Change (1982 Dollars)*
First 1984	$41.812	$39.863	13.3%	10.5%	9.5%
Second 1984	42.585	40.356	5.0	10.5	4.9
Third 1984	44.028	41.737	13.7	12.4	2.3
Fourth 1984	44.427	42.050	3.0	3.6	1.5
First 1985	46.581	43.658	15.3	14.6	3.0
Second 1985	46.989	43.849	1.7	5.7	2.3
Third 1985	48.096	44.656	7.4	8.7	4.1
Fourth 1985	48.900	45.730	9.6	10.7	2.1
First 1986	50.890	47.254	13.3	12.4	3.7
Second 1986	51.629	48.084	7.0	11.4	0.6

*The adjusted GSP is the annualized GSP in billions of 1982 dollars, minus the contributions of the agriculture and mining industries.

[r]Revised

Source: Center for Business Research, College of Business, Arizona State University; in cosponsorship with the ASU College of Business Dean's Council of 100.

Year-end Acknowledgments

Monthly publication of a data-based periodical such as *Arizona Business* reflects numerous and diverse behind-the-scenes efforts. As 1986 draws to a close, we would like to acknowledge the contributions of those individuals whose expertise, hard work and dedication have brought our readers current economic/real estate data and analysis over the past year.

Sandra Palais and Peter Luan, computer specialists, provide computer assistance with the many Center for Business Research projects on which we regularly report in *Arizona Business*. Palais also produces the computer-generated graphic figures that appear in each issue. In addition, she provided invaluable problem-solving assistance during the Center's transition to a desktop publishing system.

Nancy Merz, Center Research Assistant, collects and compiles data for the consumer price index, building permits and the Center's database. Graduate Research Assistant Barbara Connell assists in collecting prices for the CPI.

During 1986, the center's administrative, secretarial and clerical staff assisted in numerous ways, including manuscript processing, distribution and bookkeeping for *Arizona Business*. We extend special thanks to Joyce Didia, Sylvia Jackson, and Ruth Ann McClarnon.

Indian Graphics prints *Arizona Business*.

We appreciate all of your efforts!

– **Lee R. McPheters**
Center Director

– **Mary Wery Garcia**
Editor

Minority and Non-Minority-Owned Businesses

Study Reveals Significant Differences

Minority business owners in Maricopa County are much more inclined to establish company goals, policies and procedures than non-minority business owners, according to a fall 1984 study of 423 minority- and non-minority-owned businesses. Non-minority business owners are younger, better educated, and have more business experience than their minority counterparts.

The study identified other key differences in the areas of ownership, personnel management, business practices and clientele.

METHODOLOGY

A questionnaire was mailed to 1,500 firms in Maricopa County, randomly selected from the 6,000-member listings of the Phoenix Metropolitan Chamber of Commerce and the Arizona Hispanic, Black and Chinese-American chambers of commerce. These businesses were asked to identify themselves according to the federal government's "retail trade" Standard Industrial Codes 52-59 and the "manufacturing" and "services" classifications of Valley Bank's 1985 *Arizona Statistical Review*.

Of 465 surveys returned, 423 (91 percent) were usable, 103 of which had been completed by minority firms. Retail service businesses were the most common form of non-minority-owned enterprise (36 percent), while minority-owned-businesses were clustered in the manufacturing category (35 percent).

KEY DIFFERENCES

Ownership

Forty-five percent of the non-minority business owners were less than 46 years old. Almost one-third were college graduates, while an additional 35 percent had some college education. The majority (60 percent) of minority business owners were age 46 years or older, with only 5 percent having obtained a college degree.

The minority owners had less business experience, averaging two years of prior retail business exposure and an additional three years of non-retail work experience. The most striking difference was the average number of years they had been involved in their current business: Non-minority owners averaged 14 years, compared to an average of two years for minority business owners. Not surprisingly, minority business owners generally represented the first generation to own the family business, while non-minority-owned businesses were, on average, into their second and third generation of family succession and/or were separate from the parents' business.

The predominant form of legal ownership for non-minority-owned businesses was the corporation (55 percent), followed by sole proprietorships (31 percent). Minority-owned businesses were most often corporations (45 percent) and sole proprietorships (30 percent); 15 percent were partnerships, considerably higher than the 4 percent of non-minority-owned businesses indicating that form of legal ownership.

Personnel Management

The study also revealed striking differences in the number and management of employees. On average, the non-minority-owned businesses had 10 full-time and five part-time employees. Minority-owned businesses averaged only two full-time and two part-time employees.

A greater number (55 percent) of minority-owned businesses had policy and procedures manuals than did non-minority-owned businesses (25 percent). Asked whether they had established company goals, minority owners responded overwhelmingly in the affirmative (70 percent), compared to only 29 percent of the non-minority owners.

Most non-minority business owners spent an average of 26 percent of their time directly supervising employees, much less than the 60 percent spent by minority business owners. This contrast can be attributed to the predominance of manufacturing firms in the minority-ownership category, while most of the non-minority-owned businesses fell into the retail categories.

Business Practices

Two-thirds of the non-minority business owners reported using computers for business transactions, budget preparation, financial forecasting, invoicing, and inventory controls. This percentage is dramatically more than the 20 percent of minority owners who utilized computers. However, 55 percent of the minority owners were considering the purchase of a personal computer for their business in the near future.

Another difference is that the non-minority-owned businesses were open, on average, 25 hours per week more than the minority-owned businesses. Finally, minority-owned businesses used different media for advertising, concentrating on Hispanic radio and the yellow pages, while non-minority-owned businesses primarily advertised via newspapers, fliers, and radio.

Clientele

A marked difference exists in the gender and age of clientele served. Most clients of minority-owned businesses were male and less than 45 years old. The customers of non-minority-owned businesses were evenly split between men and women, with no age distinction.

A significant difference also exists in the clientele's method of payment. Seventy-five percent of the customers of non-minority-owned businesses paid with a credit card, compared to a much smaller 12 percent of the customers of minority-owned businesses, who preferred to pay with cash.

The amount of time spent daily with customers was 30 percent for non-minority owners and 25 percent for minority owners.

– Louis Olivas

Dr. Olivas is Associate Professor in the ASU Department of General Business.

Housing Affordability Stabilizes in Third Quarter

The affordability index for new homes in the Phoenix metropolitan area remained at 95 during third quarter 1986. The index for resale homes, however, dropped to 106 from the second quarter's 108, after four consecutive quarterly increases. These values reflect small upward revisions in the affordability indexes since late 1984, a result of higher household income estimates (see Figure I and Table 1).

An index at or above 100 indicates that a median-income household is able to qualify for a median-priced home, assuming a 15 percent downpayment on a fixed-rate, conventional, 30-year mortgage and an income qualification factor of 28 percent. During third quarter 1986, a median-income household could afford an $84,225 home – more than the median-priced resale home, $79,150, but less than the median-priced new home, $88,850.

COMPONENT CHANGES

Given a specific financial package, as described above, and assuming that taxes and insurance constitute a constant 15 percent of total housing expenses, only three factors affect housing affordability: household income, home price and effective mortgage interest rate (contract rate plus fees and charges, or "points"). Interest rates rose early in the summer but then fell, making the average effective mortgage rate during the third quarter, 10.7 percent, identical to the second quarter rate.

Resale home prices advanced 2.6 percent, but much of this gain was seasonal (see the article on home sales, page 9). New home prices rose only 1.0 percent.

As a result of stable interest rates and higher prices, the monthly housing payment rose during the third quarter. For resale homes, the gain was greater than that in household income, pushing down the affordability index. Monthly payments on new home mortgages climbed approximately as much as incomes, leaving affordability unchanged.

NATIONAL AFFORDABILITY

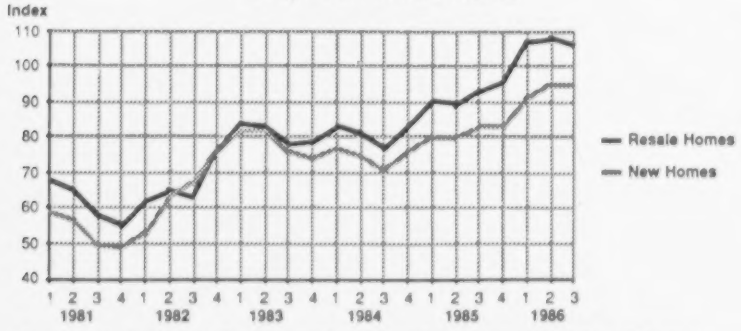
During the 1980s, housing affordability in the Phoenix area generally has slightly surpassed the national average. New home affordability maintained this relationship during the third quarter, with metropolitan Phoenix's index of 95 exceeding the national average by three percentage points, primarily because the area's housing prices were lower. Resale home affordability was comparable, however, as a decline in prices nationally brought that index up while the Phoenix index fell.

OUTLOOK

Mortgage interest rates likely will remain steady or fluctuate in a narrow range into 1987. Increases in household income should slightly outpace advances in resale home prices, especially during the fourth quarter, when price gains usually are minimal. Thus, resale home affordability should regain, and perhaps surpass, the second quarter level. With new home price increases generally exceeding those of resale homes, further stability in new home affordability is probable.

– Tom R. Rex
Research Manager

FIGURE I
HOUSING AFFORDABILITY INDEX
NEW AND RESALE HOMES
Metropolitan Phoenix, 1981-86



Source: Center for Business Research and Arizona Real Estate Center, ASU College of Business

TABLE 1
HOUSING AFFORDABILITY INDEXES
Metropolitan Phoenix

			Resale Homes			New Homes		
Quarter	*Median Gross Monthly Income*[r]	*Effective Interest Rate*	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*[r]	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*[r]
1st 1985	$2,580	13.4%	$70,900	$810	90	$79,925	$910	80
2nd 1985	2,620	13.4	72,500	820	89	81,150	920	80
3rd 1985	2,660	12.6	75,000	810	93	83,575	900	83
4th 1985	2,700	12.3	74,650	790	96	86,875	910	83
1st 1986	2,730	11.0	75,000	710	107	88,200	840	91
2nd 1986	2,760	10.7	77,150	720	108	87,950	820	95
3rd 1986	2,800	10.7	79,150	740	106	88,850	830	95

[r]Revised

Source: Center for Business Research and Arizona Real Estate Center, College of Business, Arizona State University. Interest rates are from the Federal Home Loan Bank Board *News*.

Third Quarter Home Sales Topple Prior Records

The number of homes sold in the Phoenix metropolitan area during third quarter 1986 soared approximately 25 percent higher than the number sold in both second quarter 1986 and third quarter 1985 (see Table 1). Compared to the second quarter's prior record, more than 3,800 additional homes were sold during the third quarter.

Similar increases were measured on a seasonally adjusted basis. A new seasonally adjusted record also was set, though the margin was not quite as large.

Falling mortgage interest rates during the spring set the stage for the summer's vigorous sales activity. Because sales are measured as of their date of legal recording (closing date), not the date the purchase agreement is signed (usually at least four weeks earlier), the sales activity reported here lags the change in interest rates by at least two months (see page 8 of the July/August 1986 *Arizona Business*). Following a lull in July, seasonally adjusted home sales surged during the rest of the quarter, peaking at approximately 8,100 units in September, far above June's prior peak of 6,100 units.

Sales of all types of homes rose vigorously during the third quarter. While sales of new homes, in particular, jumped above second quarter levels, new single family home sales were the only type not to set a quarterly record.

Townhouse and condominium sales, especially of existing units, have soared during 1986 from the depressed conditions of 1985. Resale townhouse and condominium sales numbered twice as many in third quarter 1986 as in third quarter 1985.

MEDIAN HOME PRICE AND APPRECIATION RATE

The median price of all homes sold in the Phoenix area during third quarter 1986 jumped 2 4 percent, to $79,500. Seasonal factors were responsible for most of the gain since resale prices, in particular, usually jump during the summer. After seasonal adjustment, the median price rose just 0.4 percent, to a level 6 percent higher than in third quarter 1985. This annual increase was consistent across all housing types except new townhouses and condominiums.

In line with price activity since the 1982 recession, part of the third quarter increase was due not to housing inflation but rather to the increasing size of homes sold. For example, the third quarter 1986 median sales price of resale single family homes was 5.6 percent higher than in third quarter 1985, but the median price per square foot rose only 3.5 percent during this period.

After an annual average increase of just 2 percent during 1985, the annualized gain in the median price per square foot of resale homes quickly climbed to 3.5 percent; it has stabilized at this level. Thus, the acceleration in housing inflation has been modest, with the current rate only slightly higher than that during 1983-84.

The appreciation rate verifies that no significant change in housing inflation occurred; it remained at 0.7 percent, the 14th consecutive quarter in the 0.7 to 0.8 percent range.

OUTLOOK

Mortgage interest rates rose during the early summer but dropped back by late summer. Recorded home sales, then, probably will slow from the record third quarter pace but stay at a relatively high level during the fourth quarter. With stable economic conditions probable into 1987, the Phoenix metropolitan housing market should remain strong; however, it is not likely to equal the peak established during third quarter 1986.

A change in housing inflation from the 3 to 4 percent rate experienced during 1986 is unlikely without accompanying changes in other factors affecting housing affordability. Valley home prices, therefore, probably will rise at approximately the overall inflation rate during 1987.

– **Tom R. Rex**
Research Manager

TABLE 1
METROPOLITAN PHOENIX HOME SALES

	Single Family			Townhouse/Condominium			Grand
Third Quarter 1986	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	Total
Median sales price	$79,150	$88,850	$82,000	$65,000	$69,225	$66,750	$79,500
Percent change from:							
Second quarter 1986	2.6	1.0	2.5	0.0	-0.5	0.5	2.4
Third quarter 1985	5.5	6.3	5.6	5.9	4.1	4.3	6.0
Number of sales	12,952	3,098	16,050	2,303	982	3,285	19,335
Percent change from:							
Second quarter 1986 ...	17.8	61.5	24.3	18.0	52.2	26.5	24.7
Third quarter 1985	28.5	-4.0	20.6	106.7	10.0	63.7	26.2

Source: Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

October Purchasing Indicators Reflect Step-Up in Growth Tempo

The Arizona economy continued to follow a moderate growth path in October, indicating that the summer doldrums have been overcome and the economy is accelerating again. Price increases were still moderate, and new orders and production advanced. Both purchased inventory levels and employment turned positive in October, an encouraging signal that the growth tempo is stepping up.

Following a slow summer, the economic growth rate began to accelerate in September. Finally, imports are declining and exports are beginning to increase; these factors will have a positive effect on the economic growth rate. While the impact of the new tax bill on business and consumer spending still is uncertain, the Arizona economy will continue to enjoy greater growth in the fourth quarter and will close out the year at a new high level.

Table 1 presents the results of the October survey of Arizona purchasing managers. Analysis of these results follows.

PRICES

Prices paid for purchased items rose in October at a somewhat slower rate than in September and at the slowest rate since May. There are few signs that prices will begin to increase at a faster rate. Moderate inflation continues, aided by the ongoing softness in crude oil and raw material prices, which adds stability to the economy.

DELIVERY TIME

Delivery time on shipments from vendors stretched again, at a somewhat greater rate than in September. Progressively expanding, the lead time increase was the largest in five months, an indication that overall business activity still is enjoying moderate acceleration.

INVENTORY LEVELS

Inventory levels of purchased materials went up, following September's slight drop. The October inventory increase was the largest since March and followed six months in which inventories either declined slightly or were unchanged. This addition to inventory signals greater activity and could give the economy a big lift if it continues over the next several months. The steady new order hikes require higher output levels, necessitating higher inventories.

NEW ORDERS

New orders booked by Arizona firms again increased nicely in October, following the upturn in incoming business that became evident in September. Both the September and October advances were the largest since the first quarter.

PRODUCTION

Production also accelerated in October but at a somewhat slower rate than in September and at the slowest rate since July. While production has increased during each month of 1986, it now should begin to climb at a faster rate to accommodate the higher order bookings.

EMPLOYMENT

Employment rose, following September's slight drop. With the exception of September, employment has grown during each month of 1986.

PURCHASES

Purchases of materials and supplies by Arizona firms increased again in October in order to meet the higher output levels and the additions to inventory.

– Harold Fearon

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona Purchasing Survey

Now in its 25th year of monthly reporting, Dr. Harold Fearon's survey of Arizona business conditions utilizes data from a questionnaire sent to members of the purchasing management associations of Arizona and southern Arizona. It asks them to indicate the direction of activity - higher, unchanged, or lower - of seven key measures of economic activity in the month just ended. These purchasing managers deal daily with supply, demand, and price factors in the marketplace; their aggregate readings have accurately charted the state's economic course for two decades, providing timely data on turning points.

TABLE 1
OCTOBER PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (October compared to September)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	23	69	8
Delivery time from vendors	23	69	8
Purchased materials inventory level	35	38	27
New orders received	44	31	25
Production	36	41	23
Employment	18	71	11
Purchases	38	36	26

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona

Arizona Leading Index Flat in September

The Arizona Index of Leading Economic Indicators was unchanged in September, after rising in six of the seven prior months. The index value of 109.6 was the same as the revised value for August (see Figure I).

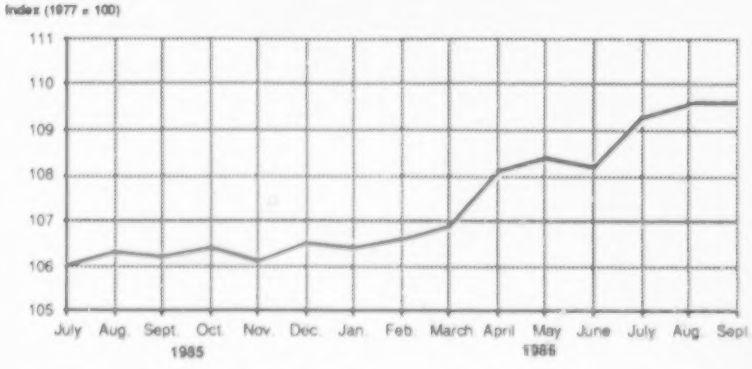
Only three components rose in September (see Table 1). Residential building permits climbed for the third straight month and for the seventh time during 1986. The September level matched the cyclical peak attained in July 1985. The national money supply (M2) advanced for the eighth consecutive month, but September's gain was the smallest during this period.

While the new orders component increased, the other indicators derived from a survey of Arizona purchasing managers fell. Each of these components stayed well below its cyclical peak, reached in late 1983 or early 1984. Though fluctuating from month to month, these indicators have shown no direction during the last 12 months.

After five straight monthly declines, the number of initial unemployment insurance claims rose in September (a negative indicator). The number of claims in recent months have remained higher than in 1984, when they reached their cyclical low.

The change in sensitive materials prices was negative for the second straight month, completely wiping out its gains of early summer. This component also has been directionless since 1984; it peaked in early 1983. No sign of a resurgence in inflation is reflected in this indicator.

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Center for Business Research, College of Business, Arizona State University

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution+			
	June	*July*	*Aug.*	*Sept.*
Delivery Time*	-.09	.04	-.02	-.02
Inventory Levels*	-.01	.01	.04	-.04
New Orders*	-.12	.04	-.04	.09
Production*	-.03	.07	.04	.00
Employment*	-.06	.03	.00	-.11
Residential Building Permits	-.24	.19r	.02r	.17
Unemployment Insurance Claims	.06	.01	.12	-.12
Average Workweek, Manufacturing	.02	.05	-.05	.00
Money Supply	.15	.47	.35r	.13
Change in Sensitive Materials Prices	.12	.06	-.16	-.09
OVERALL INDEX	-.19	.96r	.30r	.02

rRevised

+The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Center for Business Research, College of Business, Arizona State University.

OUTLOOK

Despite the lack of increase in the leading index, the chance of a recession beginning in Arizona before mid-1987 is just 2 percent. At no point during this long economic expansion, now into its fifth year, has the probability of an economic downturn reached even 10 percent.

Instead, the leading index signals a continuation of the economic conditions that have prevailed since mid-1984. While economic growth should accelerate during the fall and winter, as suggested by gains in the leading index through most of 1986, this improvement in an already-strong economy will be hardly noticeable.

Looking ahead to the October index, the components derived from the purchasing survey registered a moderate net gain, seasonally adjusted. The net change was negative in September and nil in August. The index probably will return to its growth path in October.

– **Tom R. Rex**
Research Manager

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT						
(In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	2nd Qtr.	51.629	1.5	9.9	NA	NA
Arizona - 1982 Dollars	2nd Qtr.	48.084	1.8	9.7	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	3rd Qtr.	193.7	0.6	1.2	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	Sept.	109.6	0.0	3.2	NA	NA
BUILDING PERMITS						
(Total Dollar Value in Thousands)						
Maricopa County	August	308,675	-19	-14	2,805,229	-3
Pima County	August	56,943	-10	-30	588,219	4
Balance of State	August	54,632	-16	16	417,735	-10
Arizona	August	420,250	-17	-17	3,811,183	-2
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	August	3,321	-5	-36	33,359	-12
Pima County	August	777	-37	-37	8,363	-6
Balance of State	August	833	-23	-49	8,104	-32
Arizona	August	4,931	-15	-39	49,826	-15
HOME SALES						
Maricopa County - Number	Sept.	7,704	23	63	47,794	16
Maricopa County - Median Price	Sept.	80,000	1.3	6.7	77,900	6.0
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	3rd Qtr.	95	0.0	14.5	NA	NA
Metropolitan Phoenix - Resale Homes	3rd Qtr.	106	-1.9	10.4	NA	NA
MORTGAGE INTEREST RATES						
(Conventional, 30-year, Fixed-rate)						
Maricopa County	Oct.	9.9	0.0	-17.5	NA	NA
POPULATION ESTIMATES						
(In Thousands)						
Maricopa County	3rd Qtr.	1,922	1.1	4.6	NA	NA
Arizona	3rd Qtr.	3,413	1.0	4.2	NA	NA
ELECTRICAL POWER SALES						
(In Millions of Kilowatt Hours)						
Arizona	Sept.	3,060	-26.3	3.0	28,008	1.2

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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